STATE OF IDAHO
DIVISION OF
ENVIRONMENTAL QUALITY

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Dirk Kempthorne, Governor
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June 16, 1999

Ms. Carla Fisher
Ms. Kelly Huynh
U.S. Environmental Protection Agency, Region 10
1200 Sixth Avenue
Seattle WA 98101

Re: Pre-certification information for NPDES Permits: Hayden Area Regional Sewer Board ID-002659-0; City of Post Falls ID-002585-2; and City of Coeur d'Alene ID-002285-3

Dear Carla and Kelly:

Thanks for the opportunity to review the preliminary drafts of the subject NPDES permits on the Spokane River. The purpose of this letter is to provide comments regarding water quality standards and mixing zone criteria applicable to the permits. The DEQ intends to act on water quality certification pursuant to §401 of the Clean Water Act, after review of the final NPDES Public Notices. Please note, we may include additional permit requirements in the final §401 water quality certifications of these permits. We offer the following information for your consideration in further development of the permits:

1) ***Water quality standards*** - The Spokane River in Idaho is classified as protected for the following designated beneficial uses: domestic water supply; agricultural water supply; primary contact recreation; secondary contact recreation; cold water biota; and salmonid spawning (IDAPA §16.01.02.110.01.pp). Discharges to the Spokane River are subject to Water Quality Standards and Wastewater Treatment Requirements IDAPA 16 Title 01, Chapter 02, specifically, water quality criteria and point source rules provided in §§200 through 420. Idaho's antidegradation policy for the Spokane River is analogous to tier one water bodies identified in national antidegradation guidance, which requires that existing beneficial uses and the level of water quality necessary to protect the existing uses be maintained and protected (IDAPA 16.01.02.051).

2) ***Critical low flow assumptions*** - The DEQ believes the 7-day and 1-day annual low flow records from USGS Post Falls gaging station, prior to around 1968, are not representative of extreme low flow rates and variability of data recorded after 1968. Use of the USGS Post Falls flow gaging record after 1968 is more appropriate for estimating 7Q10 and 1Q10 low flow values. The Log-Pearson Type III distribution yields a 7Q10 estimate of 329 cfs and a 1Q10 estimate of 163 cfs. Seasonal 7Q10 and 1Q10 values calculated between October and June are appropriate for deriving water quality based effluent limitations associated with discharges that occur between October and June. The Log-Pearson Type III distribution yields a seasonal 7Q10 of 1042 cfs and 1Q10 of 728 cfs. The Spokane River Water Quality Management Plan - Technical Advisory Committee (River-TAC) has developed a memorandum that provides additional information on the basis for determining critical low flow estimates on the Spokane River in Idaho.

3) ***General mixing zone criteria*** - Idaho's water quality standards allow mixing zones associated with wastewater discharges in some instances. Generally, chronic mixing zones in Idaho may not include more than twenty-five percent (25%) of the 7Q10 low stream flow. The DEQ may also allow a "zone

of initial dilution" where acute criteria may exceed water quality standards (IDAPA 16.01.02.060). This "zone of initial dilution" is assumed to be twenty-five percent (25%) of the 1Q10 low stream flow. Chronic and acute mixing zones as defined here may be applied to water quality based effluent limits, where necessary, for the following pollutants: ammonia; total chlorine residual; pH; and toxic substances, except lead, cadmium and zinc. The permits should assess ammonia toxicity using the acute and chronic ammonia criteria equations for cold water biota (IDAPA §16.01.02.250.02.c.iii). Ambient limits for total chlorine residual for protection of aquatic life are 11 μg/L (chronic) and 19 μg/L (acute). The appropriate ambient pH range for the Spokane River is 6.5 - 9.0. The DEQ reserves its authority to further define the applicability, size, configuration and location of site-specific mixing zones for pollutant discharges associated with the subject permits.

4) ***Tiered, seasonal ammonia limits*** - Where necessary, seasonal ammonia effluent limits may be developed for discharges that occur between October and June. Seasonal ammonia limits should be calculated from seasonal (October - June) 7Q10 and 1Q10 low flows provided in item #2. Effluent flow tiered limits for ammonia may also be applied to permits provided the average daily effluent flow does not exceed assumed tiered flows at any time.

5) ***BOD and TSS loading*** - Technology-based treatment standards for BOD and TSS (30/30) along with current plant design flows should be used to determine allowable BOD and TSS loadings. Where desired, technology-based standards for CBOD (25 mg/L) may be used to establish limitations for BOD. The permits should also recognize the ongoing efforts of the River-TAC to assess the need for long-range water quality-based limits for conventional pollutants. Such limits may be necessary to maintain existing levels of beneficial use support in the future.

6) ***Reasonable potential analysis and effluent limitations for metals*** - Mixing zones defined in item #3 may be applied to "reasonable potential to exceed" determinations and subsequent wasteload allocations for regulated toxic substances, except those metals that currently exceed water quality standards for ambient background water quality (i.e., lead, cadmium, and zinc). If wasteload allocations for lead, cadmium and zinc are deemed necessary based on "reasonable potential to exceed" analyses, such allocations should be based on end-of-pipe limits as derived from gold book criteria and in consideration of typical effluent hardness associated with these POTW's. We also note that the current amount of monitoring data available for these analyses is generally limited. This has lead to new water quality-based effluent limits in some cases. As such, compliance schedules may need to be developed that provide the agencies a mechanism to further evaluate effluent toxicity issues.

7) ***Fecal coliform limits*** - Protection of primary and secondary contact recreation uses should be based on "end of pipe" compliance with water quality standards. Specifically, fecal coliform bacteria counts in effluent between May 1 and September 30 should not exceed primary contact recreation requirements of 500/100 ml any time; 200/100 ml in more than ten percent (10%) of the total samples taken over a 30-day period; and a geometric mean of 50/100 ml based on a minimum of five samples taken over a 30-day period. Fecal coliform bacteria counts in effluent between October 1 and April 30 should not exceed 800/100 ml any time; 400/100 ml in more than ten percent (10%) of the total samples taken over a 30-day period; and 200/100 ml based on a minimum of five samples taken over a 30-day period.

8) ***Other comments*** - The HARSB permit should include additional requirements for the timing of the biosolids application. In the past, biosolids have been land applied to the farm fields owned by HARSB in the fall with no crop being planted. The application site is over the Rathdrum Prairie Aquifer which provides drinking water for more than 400,000 people. The DEQ has determined that land application of biosolids is an activity which can safely occur over the aquifer if the applications meet all applicable federal "503 Regulations." Applying the biosolids in an agronomic fashion to control the amount of nitrogen which can leach past the root zone and down into the groundwater is one of the key groundwater protection components. Applying the biosolids in an agronomic manner can be achieved if the following conditions are met:

a. Biosolids will be applied in accordance with the nitrogen demands of the particular crop.
b. Biosolids will be applied between April 1 and September 15 of each year.
c. Biosolids may only be applied if it can be demonstrated that the nitrogen applied with the biosolids will be utilized by the crop or stubble within the "growing season" which occurs April 1 to October 15.

Thanks again for the early opportunity to review the permits. Please make sure all public comments are available to us while we consider certification.

Sincerely,

Mike Hartz
Water Quality Compliance Officer

cc: River-TAC Members
Gwen Fransen, DEQ, Cd'A
Doug Conde, AG's Office, Boise